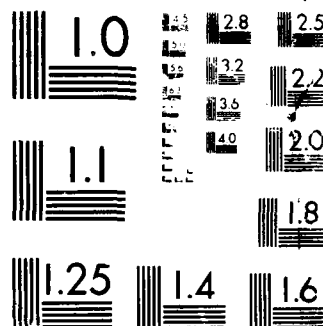


A MODEL FOR FAMILY PRACTICE AT FORT HOOD TEXAS(U)  
ACADEMY OF HEALTH SCIENCES (ARMY) FORT SAM HOUSTON TX  
HEALTH CARE ADMINISTRATION J C COX JAN 78 HCA-61-88

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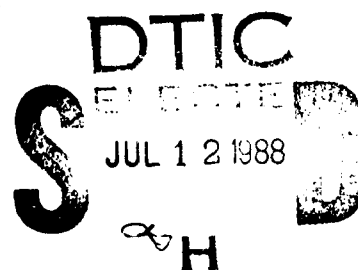
A MODEL FOR FAMILY PRACTICE  
AT FORT HOOD, TEXAS

A Problem Solving Project  
Submitted to the Faculty of  
Baylor University  
In Partial Fulfillment of the  
Requirements for the Degree  
of  
Master of Health Administration

by

Captain John C. Cox

January 1978



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## I. INTRODUCTION

Fort Hood is an active Army post located in central Texas. At the present time, the post has the largest contingent of personnel employed for defense purposes in the entire free world. Two full-strength divisions - the 1st Cavalry Division and the 2d Armored Division, the 6th Cavalry Brigade, III Corps Headquarters, TRADOC Combined Arms Test Activity (TCATA), the 13th COSCOM, as well as several smaller units, are based at Fort Hood. This enormous troop population is served by a hospital designed and built to serve the soldiers and dependents of approximately one division. As should be readily apparent, that hospital, the U.S. Darnall Army Hospital, is hard pressed to provide the volume of medical care which its beneficiaries demand.

Space within the hospital proper is a precious commodity. Clinics are crowded and patients occasionally have to wait over a month for routine appointments. The waiting room in the pediatric clinic, for example, is continuously congested due to the crowding of such large numbers of parents and children in such a limited area. The pharmacy waiting area is the lobby located at one of two main entrances to the hospital. During normal duty hours the pharmacy waiting area and adjoining corridors are overflowing continuously with people waiting for their prescriptions to be filled. The

lobby at the other main entrance is occupied by a makeshift screening clinic. It is commonly overwhelmed with patients seeking immediate entry into the health care system. In this area, like in the pharmacy waiting area, patients who are waiting their turn frequently are found standing along lobby walls, in the entrance passageway, and down adjoining corridors.

Plans have been made to triple the clinic space at Darnall, but it will be at least eighteen months before construction will begin and probably four to five years before it is completed. Because the construction includes an electrical-mechanical upgrade which will require the complete gutting of the existing clinic spaces as well as some other areas, it is envisioned that some clinical services within the hospital will have to be sharply curtailed during the construction period. After contemplating current conditions, the long wait for additional space, the expected disruption of clinical services, and the discontent that these conditions can generate, the commander of the hospital requested that a model be developed for the establishment of a family practice program. It was his opinion that through family practice, those eligible for medical care could be better served during this period of disrupted clinical services.

#### Statement of the Problem

The problem was to determine the most optimal model for the establishment of a family practice program at Fort Hood, Texas.

### Research Methodology

Data pertinent to the development of a family practice model at Fort Hood was obtained through review of local demographics and clinical work loads. Furthermore, responsible individuals working in existing Army family practice programs were interviewed telephonically. These interviews were used to surface potential problems and to ascertain experience factors such as staffing levels and work loads. Finally, a costs/benefits analysis of each alternative was performed to assist in determining the appropriate recommendation.

### Project Outline

Objectives.--This study was directed by the Commander, U.S. Darnall Army Hospital, as a result of his desire to insure that Fort Hood health care beneficiaries receive the best in primary and continuous medical care. The objective of this study was to develop an optimal model for family practice at Fort Hood. Each alternative was examined for feasibility, as well as acceptability. Intermediate objectives were as follows:

1. Determine demographic information pertinent to Fort Hood military families.
2. Determine current clinic work loads.
3. Develop a recommendation based on available alternatives.
4. Determine staffing requirements for family practice program.

5. Determine floor space requirements for family practice program.
6. Determine equipment requirements for family practice program.

Criteria.--Criteria was derived from current literature, guidance provided by the family practice consultant to the Surgeon General, practical experiences of other family practice programs, and local command guidance. Local command guidance prevailed in establishing the criteria that a family practice model for Fort Hood must provide for the rendering of comprehensive primary and continuing medical care to panels of not less than eight hundred families per family practice physician.

Each alternative was evaluated on its potential for consumer satisfaction and convenience, provider acceptance, and adaptability to the Fort Hood environment. Those factors influencing consumer satisfaction and convenience were given highest precedence in selection of the best family practice model for Fort Hood.

These factors were examined in assessing potential for consumer satisfaction and convenience:

1. Impact on consumer's orientation to health care delivery in the military (short range).
2. Indication of provider organization's concern for the patient.
3. Transportation demands imposed upon the consumer.
4. Availability of parking.

5. Adaptability of concept for the treatment of all beneficiaries at some future date.

The following subjects were evaluated for possible impact on provider acceptance:

1. Ability to interact with other specialists.
2. Ease of care for inpatients.
3. Availability of dependent outpatient records in emergencies.
4. Availability of service member health records.

Next, these criteria were utilized to judge the adaptability of a family practice mode to the Fort Hood environment.

1. Requirement for additional equipment.
2. Efficient utilization of support personnel.
3. Impact on troop sick call.
4. Space requirements.
5. Cost based on fire safety code.
6. Consequence of patient volume.

As the final criteria, the commander indicated that each concept should be considered without regard to the availability of facilities, staffing, and funding. (The Commander, III Corps and Fort Hood; and Commander, Health Services Command, both indicated that they would provide the assets required to implement family practice at Fort Hood.)

Limitations.--The following limitations were imposed on this study:

1. The family practice program should be limited initially to only active duty service families who reside either in post family housing or in quarters off post. (Retired personnel and their dependents and single military personnel living in the barracks were specifically excluded from participation in family practice.)

2. The study should be limited to solutions which provide for implementation of a family practice program by summer 1978. (Due to the limited availability of family practitioners this limitation was modified to allow for a time-phased program.)

3. Participation in family practice would be mandatory as it becomes available.

4. The study is limited to only those solutions which provide for the addition of staff over and above existing authorizations.

5. The study should be limited to those solutions which excluded the initial use of physicians' assistants and nurse practitioners.

Assumption.--It is assumed that in the event of any changes of command succeeding post and hospital commanders will support implementation of family practice at Fort Hood.

Literature Review.--A literature review was conducted to provide the author with background information on family practice. Much of the literature on the subject under study that proved beneficial were unpublished papers prepared by members of the Army

Medical Department (AMEDD). Literature addressing civilian family practice is of limited usefulness because of the significant differences in budgeting and staffing that exist between military and civilian programs.

Family practice was recognized as a specialty by the American Medical Association on February 8, 1969.<sup>1</sup> The AMA provided the following description of a family physician:

The most important concept of the family doctor is that he is one physician who provides primary and continuing care for all family members. He provides a central unifying focus from which the family can achieve adequate, complete care. In the future, he must not be the physician with the least amount of formal education, but rather one who is skillfully trained in a variety of illnesses. Training programs must be built on the principles of family care which, at the same time, allow for sufficient flexibility to prepare physicians for the larger number of potential variations in family medicine. The essence of family medicine is care of the family, something no other specialty provides. Family medicine is the family physician's job.<sup>2</sup>

With the advent of family practice as a specialty, the AMEDD became actively involved in integrating the specialty into its Medical Corps post-graduate education program. The year 1971 was a banner year for family practice in the Army. During 1971, the first consultant to the Surgeon General for family practice was appointed,<sup>3</sup> and the first family practice residency training program was initiated at Fort Benning, Georgia.<sup>4</sup> The Fort Benning program was the beginning of an educational venture which was designed to grow into a total of fifteen programs by fiscal year



1977. This goal was not attained. Even though residency programs are vital to the establishment of family practice throughout the Army, it is not the intent of this study to deal with educational programs. Therefore, further review of residency program literature would be of little assistance to this writer.

In addition to developing family practice residency programs, the AMEDD set out to establish family practice services at several hospitals. Family practice as a methodology for delivering health care to military families grew out of patient discontent with existing outpatient delivery modes. Patients complained that there was a lack of continuity of the physician-patient relationship and that they were ministered to impersonally. They further objected to long waiting times and crowded clinics.<sup>5</sup> As Collins pointed out in his article "Hospital Outpatient Service and Sound Planning," good outpatient care is vital to prevention, early diagnosis of disease, and reduction of inpatient load.<sup>6</sup> Realizing that this was true and having family practice as an option, the AMEDD developed its current programs.

There have been only three programs in family practice in the Army which were implemented independently of a residency program; these were the programs at Fort Polk, Louisiana; Fort Ord, California; and Fort Sill, Oklahoma. As far as could be determined, no one has published information on the establishment of family practice at Fort Polk. It became necessary to obtain information on the program telephonically. Fort Polk has a

hospital-based family practice program that serves only one-half of the eligible beneficiaries because of a shortage of family practice physicians. Fort Polk has only about one-fourth as many potential health care consumers as Fort Hood, and the Fort Polk hospital, being a confinement-type facility, is immensely different to the one at Fort Hood.

The Fort Ord family practice program is a combination hospital-based/community-based program that has been studied in detail by a study group from the Health Care Studies Division of the Academy of Health Sciences, Fort Sam Houston, Texas. The final report of that study group is available and was used to the maximum extent possible. Fort Ord is a one-division post similar to the size of Fort Polk.

The Fort Sill family practice program is unit-based and has been plagued with problems since its inception. Fort Sill is a training post with a population about forty percent the size of Fort Hood. As mentioned earlier, responsible members of that program were consulted in an attempt to ascertain the basis for problems that have occurred at Fort Sill.

Literature on family practice programs which serve a population as large as the Fort Hood population is all but non-existent.

#### Footnotes

<sup>1</sup>David G. Doane, "Emerging Role of the Army Family Physician in Primary Health Care Delivery," (Essay for the US Army War College, Carlisle Barracks, Pennsylvania, 1976), p. 2.

<sup>2</sup>Gregory J. Riley, Carl R. Wills, and Robert J. Haggerty, "A Study of Family Medicine," Journal of the American Medical Association 208 (June 23, 1969): 2314

<sup>3</sup>David G. Doane, "The U.S. Army Joins Family Practice - A Description of the Army's Family Practice Program," Washington, 1972. (Typewritten.)

<sup>4</sup>Doane, "Emerging Role," p. 45.

<sup>5</sup>Doane, "The U.S. Army Joins Family Practice," p. 2.

<sup>6</sup>Glenn J. Collins, "Hospital Outpatient Service and Sound Planning," U.S. Armed Forces Medical Journal 11 (May 1960): p. 516.

## II. DISCUSSION

The delivery of health care in the family practice mode is being accomplished through three different organizational configurations within the Army. Programs are either hospital-based, unit-based, or community-based. The hospital-based family practice program is the most common delivery mechanism. Normally, family practice physicians working in a hospital-based program are assigned to groups or panels made up of a mixture of active duty and their dependents and retired and their dependents. The concept of hospital-based family practice was founded on the idea that the hospital is the center of health care delivery at any post. Common to the hospital are the ancillary functions such as x-ray, pharmacy, and pathology, which are necessary for a complete medical practice; therefore, it is popular and cost efficient to locate family practice programs in the hospital proper. Other facets of hospital-based family practice programs which make them highly acceptable include the convenience of the family practitioner to his inpatients, the close affiliation with and access to other specialists within the hospital, and the ready availability of patient medical records around the clock. In addition, being located within a hospital facilitates administration. Finally, since most family practice programs are allied with residency programs, the location within a hospital

aids the educational effort. The majority of the family practice programs which have been established within the Army have been hospital-based.

The unit based family practice delivery mode has been initiated at only two Army posts—Fort Sill, Oklahoma and Fort Polk, Louisiana. Although the Fort Polk family practice program was unit-based, the clinic was collocated with the hospital and ultimately changed to the hospital-based concept. The theory behind a unit-based program centers on unit integrity and "esprit de corps." This presupposes that having a particular group of physicians minister to the family members of the soldiers who belong to the same unit in a separately identified clinic will bring those families into closer union. The unit-based concept obviously must be combined with one of the other concepts when treatment of retired personnel is added to the family practice mission because retired personnel are not associated with particular units.

As far as could be determined, the community-based family practice concept has been tested at only one post—Fort Ord, California. The basic premise of a community-based program can best be described by the old adage of "taking Mohammed to the Mountain." Theoretically family practice clinics are set up in the community with the beneficiaries in that area using the closest clinic. At Fort Ord, the North Fort Ord Family Practice Clinic was originally established with the community concept in mind, but its use was not limited to residents of the immediate area—specifically the

Patton Park housing area. Furthermore, a hospital-based program which was established at Silas B. Hays Army Hospital, Fort Ord, was also available to Patton Park residents.<sup>1</sup> Consequently, the pure community-based family practice concept has not been accurately and fairly tested.

Because of the limited availability of fully trained family practice specialists, none of the family practice programs currently in operation in the Army are able to include all eligible beneficiaries. Fort Hood has approximately 28,000 families (figure does not include nearly 26,000 troops who live in barracks, bachelor enlisted quarters (BEQ), or bachelor officer quarters (BOQ)) eligible for medical care.<sup>2</sup> If in fact a family practice physician can care for 800 families, this dictates an increment of from thirty-five to forty doctors, the addition of which very near doubles the physician strength at Fort Hood. The Fort Hood MEDDAC should expect the same shortage of family practitioners as mentioned above; therefore, allowing for a phased program is not only reasonable, but in fact very smart.

#### Demographic Study

A study of the beneficiary population on Fort Hood and in the surrounding community proves most enlightening. Approximately two-thirds of the military population at Fort Hood live on post. (Appendix A); however, only about thirty percent of the on-post military population is married. Three-fourths of all married

military members live off post since there are only 5,328 sets of family quarters on the post. To further add to the population, there are over 58,000 retired soldiers and their dependents in the area.<sup>3</sup> To complicate matters, the communities within a reasonable drive from the post are all comparatively small, the largest of which is Killeen, which has a population of 45,000. Because of the numerous small communities in the area (Appendix B), the off-post beneficiary population is widely dispersed.

Among the active duty and retired families there is a somewhat normal distribution of ages (Appendix C). A normal distribution of ages provides the family practitioner with a full range of potential maladies to treat. This helps the physician to maintain the necessary broad base of knowledge which is of paramount importance to the practice of family medicine. One should recall, however, that retired personnel and their dependents were excluded from the initial phases of the program. Even though this decision was necessary in the initial development of the Fort Hood family practice program, it is important to realize that retirees and their dependents must eventually be integrated into the program if the family practice physicians are to be able to maintain their full spectrum of skills.

Fort Hood has a reasonably high birth rate because of the significantly large number of young families in the area. Monthly U.S. Darnall Army Hospital averages approximately 200 deliveries and issues almost 150 non-availability statements. The birth

rate is only pertinent to this study in that it is an indication of the obstetric work load and the continuance of a heavy pediatric work load.

#### Clinical Work Load Study

A study was undertaken to determine the average work load of the outpatient specialty and non-specialty clinics. Monthly work load on each clinic was accumulated and converted to an average work load. Clinical work load is pertinent to this study in that it assists in predicting the volume and type of work that can be expected in a family practice clinic. In the long run (that point at which all beneficiaries are enrolled in family practice), current clinic work load figures can be used as a reference point for the possible reduction in the number and size of the specialty clinics. Average clinic work loads for the period June 1976 - May 1977, are presented in Appendix D.

#### Problems in Family Practice Programs

An interview was conducted telephonically with a responsible individual at each Army family practice program. Each interview was semi-structured which provided for answering specific questions but also allowed for spontaneous and unsolicited input from the person being interviewed. A copy of the interview format is presented at Appendix E. All persons interviewed were extremely cooperative and quite willing to share information concerning problems within their programs.

Family practice within the Army has been beset by many problems, and it would be to the advantage of the MEDDAC at Fort



Hood to avoid repeating any of those problems whenever possible. The following is a sample list of problems that have been experienced within Army family practice programs.

1. There are not enough fully trained family practice physicians to be able to provide care for all eligible beneficiaries. This causes animosity to develop among those who are not served by a family practice clinic.

2. Many hospital physicians do not believe that the family practice physicians are carrying their part of the treatment load.<sup>4</sup>

3. No staffing guide exists for family practice (all staffing is based on local appraisal); consequently, staffing is at the discretion of a particular surveyor.

4. Family practice by its very nature dictates a stable (in terms of tenure) provider base; however, this does not usually exist, particularly among support personnel.

5. Personnel often fail to clear family practice when they out-process post for permanent change of station (PCS) moves. This causes them to remain part of the program, often for a long time after they are gone, thereby precluding the entrance of new members into the family practice program.

6. Physician's patient panels easily become overloaded with retirees if a quota system is not established.

7. When patient panels are assigned to a particular physician, great problems arise when the physician goes on leave, temporary duty (TDY), or is off because of having night duty.

8. Many programs lack adequate physical facilities.
9. Patients intermittently abuse the system by seeking care outside family practice without a consult.<sup>5</sup>
10. Some programs lack command support which is essential to success.
11. In many cases records of family practice patients are not readily available if an emergency arises during off duty hours.

#### Lessons Learned in Family Practice

In the delivery of health care one is seldom able to have all the necessary and "nice-to-have" assets immediately available for treatment of patients. In reality, one normally must "make do" with what is available. However, when formulating a model, one would like to provide for the optimum in assets. Therefore, it is suggested that profiting from the lessons learned in other family practice programs is a wise approach to formulating a model. Below is a list of lessons learned which was derived from the nine currently existing programs.

1. Give each physician two examination rooms and a separate office. This allows the physician to increase the number of patients he can see in a day by eliminating the time the physician loses while patients are dressing, etc.
2. Form patient panels naturally by establishing clients as the civilian practitioner would.<sup>6</sup>
3. Distinctively identify family practice records and patient identification cards for ease of reference and to insure

specialty clinics are aware that a patient is a member of family practice and should only be treated via a consult.

4. Develop a means to assure that families being transferred to another post out-process through their family practice clinic.

5. Allow family practice service to control their personnel resources if the spirit of the concept is to survive.<sup>7</sup>

6. Include all eligible beneficiaries in the family practice program to avoid problems caused by discrimination. (Universally, satisfaction among program participants is extremely high.)

7. Expect about 12.5 to 13.0 visits to be generated within a year from the average family. (Visits should average from 17 to 18 minutes in length.)<sup>8</sup>

8. Provide for the added administrative burden of managing physician panels when they exist.

9. Establish x-ray and laboratory facilities in a family practice clinic only when the number of physicians is large enough to generate sufficient work load to justify the expense of installation and operation. (Fort Ord is the only location where this has been tested.)<sup>9</sup>

10. Establish clinics within the hospital to avoid the many duplications of personnel, supplies, and equipment found in multiple free-standing clinics.

11. Use nurse practitioners in the management of chronic illnesses.

12. Locate family practice clinics within the hospital to facilitate the management of family practice inpatients.

13. Assign patients to a group of physicians instead of a single physician in order to provide flexibility and to cause less stress when practitioners go on leave, TDY, or have night duty.

#### Alternative Approaches to Family Practice

The Fort Hood MEDDAC could provide a family practice service utilizing any one of the three modes mentioned earlier in this discussion. Those modes are presented in the light of advantages and disadvantages of each alternative. The recommendation of the one alternative that should be implemented will be based on the criteria established in the introduction to this paper. Based on the indication that adequate staffing, facilities, and funds will be made available, the final recommendation of an optimal model for family practice at Fort Hood will not necessarily be the alternative which is most economical for the Army.

#### Hospital-Based Family Practice

By definition, a hospital-based family practice at Fort Hood has to be located on the premises of U.S. Darnall Army Hospital. This mode has numerous advantages and several disadvantages.

Advantages.

1. Location of family practice within Darnall avoids some of the confusion experienced initially by the other two modes. Patients are oriented toward presenting at a hospital when they are ill. Assignment to specific clinics outside of the hospital would be expected to create the same confusion that arises with any new program.
2. If allowed in the future, all eligible beneficiaries can be treated under this concept.
3. Location of family practice within the hospital facilitates interaction between family practitioners and other specialists. (This is an advantage which has enhanced the acceptance of family practice as a specialty by other specialists.)
4. This means of providing service via the family practice mode minimizes the amount of time a physician needs for ministering to his hospital inpatients, but he is immediately available if the inpatient's condition demands attention. No time is lost traveling between locations and looking for a parking place.
5. Outpatient records for dependents when maintained in the Outpatient Records Branch, Patient Administration Division, are conveniently available at all times.
6. This mode has available to it the very sophisticated assets of a hospital department of radiology, department of pathology, and pharmacy service. It would not require additional assets in these three high cost areas.

7. A hospital-based family practice provides for the most efficient utilization of administrative personnel. For instance, it eliminates the need for additional medical records personnel. (Note: Several existing family practice programs maintain their own outpatient records because of their family practice residency program requirements.) The hospital-based program also reduces the supervisory non-commissioned officer requirements.

8. A hospital-based family practice program does not interfere with troop sick call in troop medical clinics.

9. This mode keeps dependent patient traffic out of troop areas.

Disadvantages.

1. A hospital-based family practice program at this post does little or nothing to eliminate the mass production syndrome that one receives from such an already terribly overcrowded hospital as Darnall. This shows little organizational concern for the patient.

2. Under this concept transportation is an acute problem for the many one automobile families.

3. The hospital has a limited number of parking spaces which causes the patient to expend considerable time searching for a place to park.

4. Because of the contingency missions of the combat units at Fort Hood, the health records of family sponsors must be kept at their serving troop medical clinic. Consequently, all the

records for a hospital-based family practice program cannot be kept in one location. This is somewhat incommodious whenever the sponsor is to be seen at the family practice clinic.

5. A family practice clinic requires an enormous amount of floor space, and as mentioned in the introduction to this paper, that is one commodity which is extremely critical at Darnall at this time. Even if the Acute Minor Illness Clinic could be converted to a family practice clinic (this could not happen until all beneficiaries become members of the family practice program), this would provide only a small portion of the needed floor space.

6. Family practice clinics located within a hospital are subject to the same strict fire safety standards as the hospital in which they are located.<sup>10</sup> This causes the facilities to be of much more expensive construction than is necessary for the operation of the clinic by itself.

7. High patient volume already exists within the hospital, and addition of family practice would aggravate the condition.

#### Unit-Based Family Practice Program

For a unit-based program at Fort Hood to be at all feasible it has to be established utilizing troop medical clinics. Furthermore, it needs to be established at the lowest practical unit level to stay within the spirit of the concept. Because of the number of troop medical clinics that exist (fourteen), the most practical unit level is the brigade. This concept presents the following advantages and disadvantages.

Advantages.

1. The unit-based family practice concept is designed to show concern for the consumer by using health care to bring the families of a military organization into a common bond.
2. By treating a service member and his dependents in the same clinic, outpatient and health records are available to the physician at all times during normal duty hours.
3. Troop medical clinics have less restricting fire safety requirements because of the absence of inpatients.
4. This approach reduces patient traffic at the main hospital and the mass production syndrome is diminished.

Disadvantages.

1. Initially, this mode causes confusion on the part of patients because of their hospital orientation to health care.
2. Under this concept transportation is an acute problem for the many one automobile families.
3. Parking space is extremely limited at the troop medical clinics.
4. A unit-based family practice does not allow for treatment of all beneficiaries, since retirees do not have a unit of assignment.
5. Family practice physicians in unit-based programs are hampered by being unable to consult face to face with other specialists. This situation is not conducive to positive physician relations.



6. Being located in a troop medical clinic causes the family practice practitioner to lose considerable time commuting between the hospital and his clinic. Moreover, he is not readily available if one of his inpatient's condition demands immediate attention.

7. A charge of quarters (CQ) has to be available at night in each clinic, or the hospital duty officer must have keys to each clinic in order to obtain dependent outpatient records for emergency cases.

8. This concept causes expensive duplication of x-ray and laboratory equipment and provides only limited on-site diagnostic capability.

9. Unit-based family practice causes costly duplication of administrative, ancillary, and non-professional medical personnel.

10. Placing family practice in a troop medical clinic interferes with routine troop sick call during morning hours if both were held concurrently. Furthermore, concurrent operation causes a mix of dependents and troops (specifically single troops) which could create a less than harmonious situation.

11. The physical facilities in most of the troop medical clinics would provide adequate examination rooms and office space for only one doctor.

12. Location of a family practice clinic at a troop medical clinic increases dependent traffic in troop areas.

### Community-Based Family Practice

The last of the three concepts for family practice is the community-based mode. Because of the dispersion of family population concentrations, this method is certainly worth consideration. The following advantages and disadvantages are presented for the community-based concept at Fort Hood.

#### Advantages.

1. The service is provided in a location that is close to the consumer's home, which indicates the provider organization's immense concern for the consumer.
2. This concept significantly reduces the transportation problems imposed upon the consumer.
3. If allowed in the future, all eligible beneficiaries can be treated under this concept.
4. A community-based family practice does not interfere with troop sick call.
5. Facilities can be developed or converted to meet space requirements under this concept.
6. Clinics established separate from inpatient facilities have less restricting fire safety requirements.
7. This approach reduces the patient traffic at the main hospital and the mass production syndrome is diminished.
8. This mode keeps dependent patient traffic out of troop areas.

Disadvantages.

1. Initially, this mode causes confusion on the part of the patients because of their hospital orientation to health care.

2. Family practice physicians in community-based programs are hampered by being unable to consult in person with other specialists. This situation is not conducive to positive physician relations.

3. Being located away from the main hospital causes the family practitioner to lose considerable time commuting between the hospital and his clinic. Moreover, he is not readily available if one of his inpatient's condition demands immediate attention.

4. A CQ has to be available at night in each family practice clinic, or the hospital duty officer must have keys to each clinic in order to obtain records for emergency cases.

5. Because of the contingency missions of combat units at Fort Hood, the health records of family sponsors must be kept at their serving troop medical clinic. Consequently, all the records for a community-based family practice program cannot be kept in one location. This is somewhat incommodious whenever the sponsor is to be seen at the family practice clinic.

6. This concept causes expensive duplication of x-ray and laboratory equipment and provides only limited on-site diagnostic capability.

7. Community-based family practice causes costly duplication of administrative, ancillary, and non-professional medical personnel.

(Note: The issue of parking at community-based family practice clinics cannot be addressed at this time.)

#### Comparison of Alternatives

The three alternatives must be compared keeping in mind the situation at the Fort Hood MEDDAC as it currently exists and as it is expected to be in the future. One must also recall the purpose of this study and the limitations imposed upon the study.

It should be obvious that the smallest capital outlay would be accomplished if family practice were to be established in the hospital-based mode. Both the unit-based and the community-based programs require significant initial outlays of capital for several high cost items such as x-ray units and laboratory equipment and many moderate cost items such as examination tables, supply cabinets, waiting room furniture, and other office type equipment. The hospital-based program principally uses existing capital equipment. On a post the size of Fort Hood, one would assume that the post commander could make existing buildings available for either a unit-based or community-based program. Therefore, capital outlays for major construction should not enter the picture as a cost factor at this time. (When major construction is required, one must realize that because of fire safety codes, construction of facilities for outpatient use only, is less expensive.) There would most certainly be some minor construction cost to consider depending upon the type of building provided.

Even though unit- and community-based programs demand considerable capital outlay, one must examine the cost of all programs in terms of the availability of space. As noted in the introduction, space in the hospital is already at a premium. Furthermore, with the prospect of construction in the near future, one would question whether or not it would be judicious to subject patients to the congestion and confusion of the hospital proper any more than is necessary. The unit- and community-based programs could both reduce traffic and congestion within the hospital.

Space in existing troop medical clinics is considerably cramped. Examination and treatment rooms are severely limited in both size and number. The addition of x-ray and laboratory capability would further reduce the space available for treating patients. On the other hand, space requirements could dictate the size of community-based clinics. Since those clinics do not currently exist, buildings selected for the program could be chosen based on size.

All three concepts would require additional personnel assets. The hospital-based program would achieve greatest efficiency in the utilization of personnel because an economy of scale would be realized in supervisory and clerical personnel. The number of nursing personnel and physicians would be approximately the same for all three modes.

At this point one cannot judge which program would be the best for Fort Hood since capital outlay is high for the community- and unit-based concepts, but space is limited for the hospital- and

unit-based modes. One might have a tendency toward selecting the hospital-based program since the patients are already having to come to the hospital for care and health care personnel can be more efficiently utilized. However, one must consider the cost to the patient. This cost is much less for at least one concept than for the other two. These patient costs include transportation expenses (i.e., gasoline, oil, wear and tear on vehicles, bus or taxi fare, etc.), child care expenses, and the mental anguish of trying to find a parking place and waiting in overcrowded clinics. The patient has to pay in terms of dollars, deterioration, and distress for all of the concepts.

Virtually no one would disagree that placing a family practice clinic in the vicinity of a family's residence would be more convenient for mothers and their children. In addition to the dollars saved on fuel, the simple reduction of time and distance to travel is of exceptional import when seeking health care; moreover, for a few families it would reduce or eliminate the need for a means of transportation. It would be difficult to substantiate but one would also expect that total soldier productivity would increase if soldiers who have quarters in walking distance of the family practice clinic did not have to leave duty to transport dependents to medical appointments.

The community-based concept was conceived to reduce patient costs and inconveniences by getting the clinic as close to the consumer as possible and by treating him in a more personalized manner.

Furthermore, the hospital- and unit-based programs are the configurations that are more costly to the patient. In a hospital-based program at Fort Hood the patient would have to continue wasting time looking for a parking place in a large overcrowded lot, waiting long periods of time at pharmacy and x-ray, and in general, being a part of the impersonal masses of one of the busiest hospitals in the Health Services Command. A unit-based program at Fort Hood would require the patient to travel further, to compete with troop sick call, and to wait longer for appointments due to the dual use of the clinic facilities.

In the unit-based mode the patient not only has to compete with troop sick call for care, but he may also interfere with that sick call. (The other concepts have no adverse effects on troop sick call.) In addition, dependent travel in troop areas further complicates the traffic problems in an already congested area. It is questionable whether this concept would enhance or hinder unit morale. One must weigh the possibility of improved unit morale against convenience and probable dollar savings to the consumer provided by the community-based model. There is little substantiation of the theory that unit-oriented medical care improves morale. A few successful quasi-family practice clinics have been established by certain flight surgeons for the families of aviation personnel, but these clinics have served very small populations not comparable to the population that would be expected within a brigade size unit. One must realize that aviation personnel have a

much more common bond (i.e., flying and maintaining aircraft) than the many personnel with the vastly different specialties common to a brigade.

In terms of provider acceptance, hospital- and community-based concepts have one disadvantage that does not exist with the unit-based mode -- the separation (by location) of dependent outpatient and service member health records. However, this disadvantage is not insurmountable because it has already been dealt with in the several hospital-based programs that currently exist. Since in most cases the service member would normally report to his unit before going on sick call, he could easily pick up his record at his troop medical clinic and go to his family practice clinic. In the case when a service member has an appointment at the family practice clinic, he could either pick up his records in advance or have them sent from his TMC to his family practice clinic via courier.

The hospital-based family practice concept has an advantage over the unit- and community-based concepts when dependent outpatient records are needed for treatment at night in the emergency room. Under the unit- or community-based program when records are needed at night, arrangements would have to be made to transport those records, thereby losing valuable time. In the hospital-based mode records would be readily available. No definite conclusion can be drawn from this argument since in most bonafide emergency cases there is not time to obtain records before initiating treatment.



For the family practice physician the hospital-based concept is most advantageous. It provides for ease in inpatient treatment and facilitates the process of interacting with other physicians. One cannot refute the advantage of being convenient to one's inpatients, but one could take exception to the argument of physician interaction. The physician who wishes close association with fellow physicians can usually arrange his time to achieve that interaction. In addition, most physician to physician consultation today is accomplished via telephone. Therefore, the magnitude of the differences between advantages and disadvantages in the realm of provider acceptance is of less import, as compared to the differences of the advantages and disadvantages in the elements of consumer satisfaction and convenience.

Finally, even though family practice was initially restricted to active duty personnel and their dependents, the community- and hospital-based modes could accomodate retirees with very little added confusion. However, the theory behind unit-based family practice precludes the treatment of retirees. The eventual treatment of retirees has considerable bearing on the long-range success of a family practice program for two reasons: (1) Retirees have the political clout to make themselves heard and therefore, to get themselves admitted to a family practice program; (2) Without people of all ages, including the elderly, the expertise of the family practitioner becomes limited, thus handicapping him in his profession.

Footnotes

<sup>1</sup>U.S. Department of Army, Family Practice Models for an Army Community - A Demonstration Project, by Duane F. Gerstenberger, Thomas B. Eschen, Terry M. Lotz, and David Mangelsdorff, HCSD 76-008 (Academy of Health Sciences, U.S. Army, Fort Sam Houston, Texas: 1976), pp. 77-80. (Hereafter cited as the Fort Ord Study)

<sup>2</sup>U.S. Department of Army, III Corps and Fort Hood, Comptroller, "Fort Hood Statistics," Fort Hood, Texas, 26 July 1977. (Mimeographed)

<sup>3</sup>Ibid.

<sup>4</sup>Doane, "Emerging Role," p. 17-18.

<sup>5</sup>Fort Ord Study, p. 65-67.

<sup>6</sup>Ibid., p. 87.

<sup>7</sup>Doane, "Emerging Role," p. 12.

<sup>8</sup>Fort Ord Study, p. 86-87.

<sup>9</sup>Ibid., p. 91.

<sup>10</sup>\_\_\_\_\_, Code for Safety to Life from Fire in Buildings and Structures. (NFPA 101-1973), pp. 101-12, 101-13, 101-111 - 101-133, 101-161 - 101-166.

### III. CONCLUSION AND RECOMMENDATIONS

#### Conclusion

No alternative concept for family practice surfaces as being the unequivocal choice for Fort Hood. The matrix at Appendix F is presented to assist in arriving at a supportable conclusion. Giving precedence to consumer satisfaction and convenience as was directed by the commander, one can conclude that either the hospital- or community-based models should be considered for implementation. However, reviewing the previous discussion, one must conclude that due to the upcoming construction project at the hospital, the optimal family practice configuration for Fort Hood at the present time would be the community-based concept. At that future time when major construction is required for family practice clinics, the decision can be made whether to build freestanding clinics, or to incorporate remaining family practice clinics in the newly remodeled hospital.

#### Recommendations

Community-based family practice is recommended as the program to be implemented at Fort Hood. The model at Appendix G is recommended for use as a basis for establishing the community clinics.

In consonance with command guidance, it is further recommended that the phasing schedule at Appendix H be considered for implementation of a community-based family practice at Fort Hood.

APPENDIX A

Population Distribution by Beneficiary Category

TABLE 1

## POPULATION DISTRIBUTION BY BENEFICIARY CATEGORY

## Active Duty Military

Residing in barracks, bachelor enlisted quarters, and bachelor officer quarters	25,922	
Residing in post family quarters	5,238	
Residing in surrounding civilian communities	16,417	
Total		47,577

## Dependents of Active Duty Military

Residing in post family quarters	15,105	
Residing in surrounding civilian communities	32,834	
Total		47,939

Retired Military and Dependents of Re- tired Military or Deceased Military	<u>58,086</u>
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Eligible beneficiary population total	153,602
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Source: U.S. Department of Army, III Corps and Fort Hood, Comptroller, "Fort Hood Statistics," Fort Hood, Texas, 26 July 1977. (Mimeographed)

APPENDIX B

Distribution of Active Duty Military Personnel  
Residing in Communities Surrounding Fort Hood

TABLE 2  
DISTRIBUTION OF ACTIVE DUTY MILITARY PERSONNEL  
RESIDING IN COMMUNITIES SURROUNDING FORT HOOD\*

Community	Distance from Fort Hood (miles)	Active Duty Military Population
Copperas Cove/ Kempner	12-17	4,572
Killeen/ Harker Heights	0-10	9,745
Nolanville	10-13	401
Belton	21-24	802
Temple	24-30	468
Other	-60	<u>602</u>
Total		16,590

Source: State of Texas, Texas Highways Department, 1975 Texas Study of Travel Patterns, 1976.

\*See Map 1, next page.

[illegible]

AMARILLO	440	MIAMI	1418
AUSTIN	64	NEW ORLEANS	563
CHICAGO	1119	NEW YORK	1789
DALLAS	164	SAN ANTONIO	150
EL PASO	579	SAN FRANCISCO	1711
FT WORTH	159	SEATTLE	2312
HOUSTON	203	WACO	60
LOS ANGELES	1552	WASHINGTON D C	1564

Map 1.



APPENDIX C

Estimated Age Distribution Among Beneficiaries

TABLE 3

## ESTIMATED\* AGE DISTRIBUTION AMONG BENEFICIARIES

Age Grouping	Estimated Population
Preschool (up to age 5)	12,000
Public School (age 5-18)	**23,000
Adult (age 19-45)	70,000
Senior Adult (age 46 and over)	48,000

Source: U.S. Department of Army, III Corps and Fort Hood, Comptroller, "Fort Hood Statistics," Fort Hood, Texas 26 July 1977. (Mimeographed)

\*Exact figures not available.

\*\*Includes approximately 5,000 dependents of retirees.

APPENDIX D

Average Clinic Work Load for Period  
June 1976 - May 1977

TABLE 4  
AVERAGE CLINIC WORK LOAD FOR PERIOD  
JUNE 1976 - MAY 1977

Clinic	Average Work Load	Clinic	Average Work Load
Acute Minor Illness	4,162	Orthopedic	2,446
Dermatology	1,117	Pediatrics	6,733
Ear, Nose & Throat	909	Physical Therapy	2,893
General Medicine	1,100	Podiatry	645
Maternal Health	2,738	Psychology	420
Medicine	3,000	Surgery	2,073
Obstetrics/ Gynecology	2,473	Urology	<u>758</u>
Optometry	2,494	Total	33,961

Source: Data obtained from U.S. Darnall Army Hospital Schedules X, prepared for FY 78 Health Services Command Manpower Survey.

APPENDIX E

Interview Format - Review of Existing  
Programs in Family Practice

Interview Format - Review of Existing  
Programs in Family Practice

Interview Format.

1. Is your family practice program hospital-based, unit-based, or community-based?
2. Are all families who are eligible for care at your hospital participants in your family practice program?
3. If the answer to question #2 is no, how is membership in your family practice program determined? Please explain.
4. How many families does each family practice physician care for? Please explain the basis for this number.
5. Do family practice physicians have hospital privileges?
6. Do family practice physicians have to pull emergency room duty?
7. What is your impression of the rapport that exists between family practice physicians and other specialists?
8. What is your clinic staffing? Is it adequate?
9. Are there any problems associated with family practice that you would like to discuss?

APPENDIX F

Comparison of Alternatives for  
Family Practice at Fort Hood

TABLE 5  
COMPARISON OF ALTERNATIVES FOR  
FAMILY PRACTICE AT FORT HOOD

Criteria	Base of Operation		
	Hospital	Unit	Community
<u>Consumer Satisfaction/Convenience</u>			
Impact on consumer's orientation to health care delivery in the military	A	D	D
Indication of provider organization's concern for the patient	D	A	A
Transportation demands imposed on the consumer	D	D	A
Availability of parking	D	D	UNK
Adaptability of concept for treatment of all beneficiaries in the future	A	D	A
<u>Provider Acceptance</u>			
Ability to interact with other specialists	A	D	D
Ease of care for inpatients	A	D	D
Availability of dependent outpatient records in an emergency	A	D	D
Availability of service member health records	D	A	D
<u>Adaptability to FH Environment</u>			
Requirement for additional equipment	A	D	D
Efficient utilization of support personnel	A	D	D



TABLE 5

Criteria	Base of Operation		
	Hospital	Unit	Community
Impact on troop sick call	A	D	A
Space requirements	D	D	A
Cost based on fire safety code	D	A	A
Consequence of patient traffic at the hospital	D	A	A
Impact of dependent traffic in troop areas	A	D	A

A - Advantage

D - Disadvantage

UNK - Unknown effect

APPENDIX G

A Community-Based Family Practice Model

### A Community-Based Family Practice Model

Many administrative and professional matters associated with any community-based family practice clinic must, of necessity, be the results of command decisions. Even before a detailed equipment list for a clinic can be completed, the commander must dictate the full scope of the practice and the credentials committee must approve the credentials of the practitioners. The model presented in this appendix is only a starting point for initiating a community-based family practice program. This model is useful only when it is combined with detailed planning and consideration of the many variables encountered when providing health care to such heterogeneous clientele.

This model consists of the following three components:

1. Staffing for community-based family practice clinics.
2. Optimal clinic space requirements for community-based family practice clinics.
3. A basic equipment list for community-based family practice clinics.

These components are derived from current Department of Defense planning guidance and from consultation with experts in various health care fields. Even though conditions vary from post to post in the Army, this model should be an excellent foundation document for initiating a community-based family practice program on any post.

TABLE 6  
STAFFING FOR COMMUNITY-BASED  
FAMILY PRACTICE CLINIC

#Families served by clinic	1200-2000	2000-2800	2800-3600	3600-4000
Manpower Requirements	10	14	19	22
Position	Staffing <sup>a</sup>			
Family Practice Physicians	2	3	4	5
Head Nurse (Military)	1	1	1	1
NCOIC			1	1
Sr Clinical Specialist	1	1	1	1
Clinical Specialist		1	1	1
Nursing Assistant	2	3	4	5
Pharmacy Specialist	1 <sup>b</sup>	1 <sup>b</sup>	1 <sup>c</sup>	1 <sup>c</sup>
Laboratory Specialist	1	1	1	1
X-ray Specialist	d	d	1	1
Med Records Specialist	2	3	2	3
Receptionist/Clerk Typist	e	e	2	2

Source: Staffing levels were developed in coordination with MAJ Joe Blatnica, member, FY 1978 Health Services Command Manpower Survey Team.

<sup>a</sup>All staffing should be predicated upon the number of family practice physicians who work in a particular clinic. The matrix above illustrates the recommended staffing for clinics with from two to five physicians.

<sup>b</sup>Physician required to dispense certain pharmaceuticals.

<sup>c</sup>Requires registered pharmacist.

<sup>d</sup>Pharmacy and laboratory specialists should be cross-trained to take x-rays.

<sup>e</sup>Job description should be combined for medical records specialist and receptionist/clerk typist.

TABLE 7

OPTIMAL CLINIC SPACE REQUIREMENTS FOR COMMUNITY-  
BASED FAMILY PRACTICE CLINICSRECOMMENDED FLOOR SPACE FOR ROOMS REQUIRED  
IN COMMUNITY-BASED FAMILY PRACTICE CLINICS

Room	Basis	Size/Square Feet
Doctor's Office	1 per doctor	110
Examination Room	2 per doctor	110
Treatment Room	1 per 6 exam rooms or major fraction	160-200
Immunization Room	#stations=inj/week 20 inj hr/ stx35 hr wk	100/station 140 minimum
Waiting Room	2.6 spaces per exam and treatment room; 12 spaces per injec- tion station.	14/space - 25/ wheelchair or litter space
Isolation Holding Rm.*	Local appraisal	90/patient
Records Area	Local appraisal	Sq ft=Proj Rec x $\frac{0.65 \text{ sf/lf}}{70 \text{ rec lf}}$
Reception Area	Seats=Avg clin vsts/ $\frac{\text{day} \times 0.2}{7 \text{ hr day}}$	14/seat + 60/ clerk. Minimum 90. Maximum 500
Nurse's Office	1 per clinic	80-110
NCOIC's Office	1 per clinic	80-110
X-ray Room	Local appraisal based on type of equipment	

TABLE 7

Room	Basis	Size/Square Feet
Pharmacy	Local appraisal based on type of equipment	
Laboratory	Local appraisal based on type of equipment	
Restrooms	1 ea male & female	30
Janitorial closet	1 per clinic	40
Staff Lounge	1 per clinic (local appraisal)	110-130
Storage Area	1 per clinic	40-100

Source: U.S. Department of Defense, DOD Space Planning Criteria - Department of Clinics, DOD Instruction 6015.17 (1969): 9, 10, 16, 14.

\*Should be available for CQ's use at night.

TABLE 8

OPTIMAL CLINIC SPACE REQUIREMENTS FOR COMMUNITY-  
BASED FAMILY PRACTICE CLINICSEXPECTED ROOM REQUIREMENTS<sup>a</sup> FOR COMMUNITY-  
BASED FAMILY PRACTICE CLINICS

Function	Number of Rooms				Notes
	2	3	4	5	
Doctor's Office	2	3	4	5	
Examination Rooms	4	6	8	10	
Treatment Rooms	1	1	2	2	
Immunization Rooms	1	1	1	1	b
Waiting Rooms	1	1	1	1	c
Isolation Rooms	1	1	1	1	
Records Area			1	1	d
Reception Area	1	1	1	1	e
Nurse's Office	1	1	1	1	
NCOIC's Office			1	1	f
X-ray (lead)	1	1	1	1	
Pharmacy	1	1	1	1	
Laboratory	1	1	1	1	g
Restrooms	2	2	2	2	h
Janitorial Closet	1	1	1	1	
Staff Lounge	1	1	1	1	i
Storage Area	1	1	1	1	j,k

Source: U.S., Department of Defense, DOD Space Planning Criteria - Department of Clinics, DOD Instructions 6015.17 (1969): 9, 10, 16, 24.

## NOTES:

- a. Number of rooms are based upon number of physicians.
- b. Immunization room can double as a treatment room when necessary.
- c. Waiting room size is based on peak occupancy expectations.
- d. Records room size is based on number of records on file.

e. Reception area is combined with records room in smaller clinics.

f. This office is not needed if there is not an NCOIC.

g. Size is based on workload and type of procedures performed.

h. Size is based on expected peak number of patients in the clinic at one time.

i. Staff lounge increases in size with number of staff.

j. Space for hallways and entrance foyers is not considered.

k. Use of nurse practitioners or physicians' assistants obviously dictates additional offices and examination rooms.



Comments on the Utilization of Physician  
Extenders in Family Practice

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As noted in the introductory portion of this paper, the initial project guidance was not to consider physician extenders in the planning for family practice. However, the shortage of family practice physicians and the rather large projected work load may well dictate the use of physicians' assistants and nurse practitioners if the program is to succeed. Therefore, one is obligated to address the use of extenders in a community-based family practice model.

The physicians' assistant (PA) in the Army is a very capable and broadly trained extender. Even though a PA might require more time for an examination, or some degree of supervision, one should consider the possible use of PAs in family practice. Unfortunately the use of PAs in family practice is unprecedented in the Army because they are also in short supply, and there is not currently an Army program for training additional PAs. However, the possibility of hiring civilian physicians' assistants should not be discounted.

The expected availability of nurse practitioners in the future is much more predictable than that for family practice specialists and PAs. Consequently, the use of nurse practitioners within family practice clinics may well be the lifesaver of the program. These nurses are trained in several specialties that are usable in family practice. The ambulatory care nurse

practitioner is trained in the management of chronic diseases and could relieve the family practitioner of the very time consuming, but routine aspects of chronic disease management. The obstetrical/gynecological (OB/GYN) nurse practitioner has the training to perform a vast array of tasks within family practice, as does the pediatric nurse practitioner. By utilizing nurse practitioners to the maximum feasible extent, the physician is made available for attending to the more complicated cases.

The number of nurse practitioners needed in a community-based family practice clinic is dependent upon two primary demographic factors. The distribution of ages of beneficiaries helps dictate the need for the ambulatory and pediatric nurse practitioner. Age distribution, coupled with the proportionate distribution of females, gives an indication of whether or not an OB/GYN nurse practitioner is needed in a particular community clinic. On the other hand, the number of PAs that can be utilized in family practice is based upon the techniques and desires of the family practice physicians themselves

A BASIC EQUIPMENT LIST FOR A COMMUNITY-BASED  
FAMILY PRACTICE CLINIC

Equipment for each physicians' office:

- Office desk with swivel chair
- Straight chair with arms
- Sectional bookcase
- Dictation equipment
- Intercom

Equipment for each examination<sup>a</sup> room:

- OB examination table
- Medicine cabinet
- Supply cabinet
- Exam stool
- Chair (for waiting parents, etc.)
- Gooseneck lamp
- X-ray illuminator
- Otoscope
- Ophthalmoscope
- Sphygmomanometer
- Eye chart
- Electronic thermometer
- Tape measure
- Sensory exam set (tuning fork, reflex hammer, etc.)
- Vaginal speculum
- Plastic card imprinter

Equipment for treatment room<sup>a</sup>:

- Adjustable, OR type treatment table
- Supply cabinets
- Medicine cabinet
- Exam stool
- OR type treatment light
- Mayo stand
- Privacy screen
- Restrainers (child and adult)
- Kick bucket
- Stainless steel basin

## Equipment for treatment room (cont'd.)

- IV poles
- IV tray
- Electrocardiograph
- Defibrillator
- Apparatus for suctioning and providing positive pressure oxygen
- Electrodesiccator
- Portable oxygen tank with face mask
- X-ray film illuminator
- Table top sterilizer
- Equipment for temporary splinting
- Cast cutter
- Procto set
- Minor surgery set with sutures
- Vasectomy set
- ENT tray
- Eye tray
- Podiatry tray
- Laryngoscope
- Ambu bag or equivalent portable equipment
- Emergency cart
- Cardiac board
- Otoscope
- Ophthalmoscope
- Sphygmomanometer
- Intercom

Equipment for immunization room<sup>a</sup>:

- Supply cabinet
- Medicine cabinet
- Refrigerator<sup>b</sup>
- Work table

Equipment for pharmacy<sup>a</sup>:

- Refrigerator
- Typewriter
- Pharmaceutical storage cabinets
- Work counter
- Small vault

## Equipment for x-ray:

- X-ray generator, tube, tube stand, table and upright bucky<sup>c</sup>
- Film processor<sup>d</sup>

Equipment for x-ray (cont'd.):

- Film dispenser<sup>e</sup>
- Pass box
- X-ray film illuminator

Equipment for laboratory<sup>a</sup>:

- Automatic blood cell counter
- Spectrophotometer
- Microscope
- Table top centrifuge
- Blood rotator
- Blood drawing chair
- Refrigerator (small)

Equipment for isolation room<sup>f</sup>:

- Hospital type bed with mattress
- Chair
- Intercom

Equipment for waiting room:

- Chairs
- Sofas
- End tables (if desired)
- Magazine rack
- Television

Equipment for reception areas:

- Reception desk or counter
- Swivel chair
- Master intercom
- Adult weight scale
- Infant weight scale
- Electronic thermometer
- Eye chart
- Sphygmomanometer
- Typewriter
- Plastic card imprinter

Equipment for records room:

- Records filing cabinet
- Single pedestal typing desk
- Swivel typist's chair
- Typewriter
- Plastic card imprinter

Equipment for nurse's and NCOIC's office:

- Office desk
- Swivel arm chair
- Filing cabinet
- Straight chair with arms
- Sectional bookcase
- Intercom

Equipment for staff lounge:

- Sofa
- Lounge chairs
- End tables

Source: Derived from information obtained from the following:

Interview with COL Harold G. Williamson, Chief, Primary Medicine Service, U.S. Darnall Army Hospital, Fort Hood, Texas, 31 October 1977.

Captain Joseph E. Gardner III, Memorandum on Non-expendable Medical Equipment for a Family Practice Clinic, 17 September 1977, Fort Polk, Louisiana.

U.S. Department of Army, Department of the Army Supply Catalog, SC 65-45-8-CL-D40 (August 1977).

NOTES:

<sup>a</sup>Requires lavatory facilities.

<sup>b</sup>Delete refrigerator in immunization room if pharmacy is proximate.

<sup>c</sup>Including necessary accessories.

<sup>d</sup>Daylight adapted.

<sup>e</sup>Daylight type.

<sup>f</sup>Should have toilet facility with shower.

APPENDIX H

Phasing Plan for Implementation of a Community-  
Based Family Practice at Fort Hood

Phasing Plan for Implementation of a Community-  
Based Family Practice at Fort Hood

The most recent guidance indicates that Darnall should expect to receive not less than five, nor more than ten, family practice specialists in the summer of 1978. It is therefore necessary to plan phasing in at least two increments. Phase I will be next summer. Phase II will be that increment that includes the somewhat nebulous period beyond next summer. (Phase II most likely will involve the construction of facilities to house family practice clinics.) Because of the extremely brief period of time that is available for planning and initiation of Phase I, it is recommended that active duty military and their dependents in easily identifiable and manageable geographical areas be the first segments of the population to receive health care in the family practice mode.

The following plan is flexible to the extent that any segment of a phase can be implemented independently.



TABLE 9

## FORT HOOD FAMILY PRACTICE PHASING

Phase	Geographic Area*	Approx # of Active Duty Families	Approx # of Physi- cians Required
IA	Montague Village, FH, and city of Copperas Cove	4,300	5
IB	Walker Village, FH, and that area of Killeen west of 8th St and north of Rancier	1,600	2
IC	Wainwright Heights, Patton Park, Chaffee Vil- lage, McNair Vil- lage, Venable Village, and Pershing Park, all FH housing areas.	2,200	3
IIA	Comanche Villages I, II, and III	2,200	3
IIB	Killeen, Harker Heights, Nolan- ville, Belton Temple, Kempner, and all other surrounding com- munities with eligible fami- lies	17,500**	21

Source: Information obtained from Fort Hood Family Housing Office and the Central Council of Governments, Belton, Texas.

\*See map on next page.

\*\*Includes retirees in all areas

Map 2. Fort Hood Family Practice Phasing

xx - Phase 1A

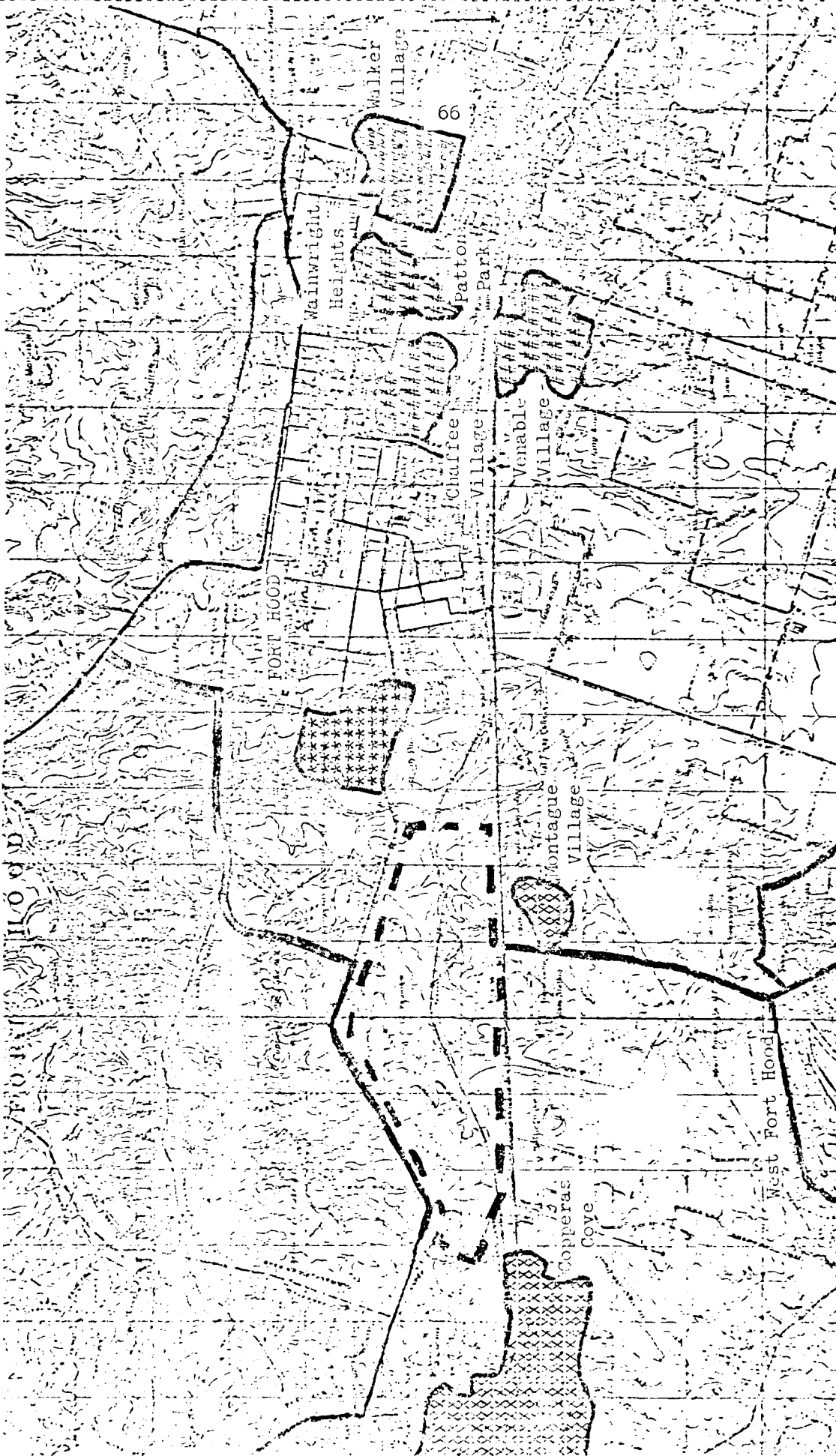
% - Phase 1B

## - Phase 1C

\*\* - Phase 11A

All other - Phase 11B

Source: Department of Defense, Defense Mapping Agency,  
Fort Hood Military Reservation, Special Map, Scale 1:75,000,  
(Undated).



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